ON SOME GENERA AND SPECIES OF THE FAMILY OSTOMIDÆ.

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At the request of Mr. Chas. Leng I prepared a list of the genera and species of this neglected family for his new checklist of Coleoptera. In this a new genus, several new species and some synonymy were included which have never been published. Therefore it was thought advisable to publish this short paper in advance of a revision of the family which I hope to publish in the near future.

Two tribes occur in our fauna, two more, the Nemozomini or Nemosomatinæ and Leperini or Leperininæ, are recognized by Reitter, Sharp and Léveillé, but the characters given are rather vague.

Inner lobe of maxillæ very short, much shorter than the outer lobe and without hook at apex. Head large, as wide, or nearly as wide as the prothorax at apex; eyes not prominent. Elytra with narrow side-margin and narrow epipleuræ. Form more or less elongate.....**Tenebroidini**

Inner lobe of maxillæ as long or nearly as long as the outer lobe, terminating at apex into a sharp, curved, hook-like process. Head small about half as wide as the prothorax at apex; eyes prominent. Elytra with lateral margin more or less explanate; epipleuræ wide. Form oval or elliptical .....**Ostomini**

Tribe TENEBROIDINI.

1. Anterior margin of prosternum separated from the anterior margin of pronotum by the more or less projecting apical angles.....7
   Anterior margin of prosternum not interrupted at sides by projecting apical angles but continuous with the anterior margin of pronotum..2
2. Head with a rather deeply and longitudinally impressed line at middle; apex emarginate, each side of the emargination produced into a subacute lobe; mandibles deflexed; antennal club bilaterally dilated....3
   Head wthout impressed longitudinal line at middle; apex more or less trisinuate; mandibles porrect; antennal club dilated only internally..4
3. Prosternum flat, not compressed between the coxæ; prothorax with distinctly raised lateral margin.....**Nemosoma** Latr.
   Prosternum compressed and narrow between the coxæ; prothorax without distinctly raised lateral margin.....**Cylidrella** Sharp
4. Elytra at base with a deep and more or less rounded, sub-humeral impression; last joint of antennal club elongate-oval and not wider

than the tenth joint; head subtriangularly flattened from a little below occiput to apex and sometimes more or less distinctly excavated; metasternum normally convex.....5

Elytra at base without deep subcircular subhumeral impression.....6

5. Last joint of labial palpi at apex narrower than the maximum thickness of the joint; last two ventral segments equal in length and much shorter than the preceding segments; punctuation of elytra serially arranged .....**Corticotomus** Sharp

Last joint of labial palpi broad at apex, rectilinearly truncate and about as wide as at the middle, rather rapidly narrowed basally; ventral segments one to three gradually and evenly decreasing in length, the fourth subequal to the third, or even a little longer and the fifth much the shortest of all; elytral punctures irregularly arranged, not in series.....**Parafilumis** Casey

6. Last joint of antennal club subquadrate and wider than the tenth joint; head convex, obliquely declivous just before the apex; metasternum relatively strongly convex at middle, sides somewhat compressed and shallowly excavated for the reception of the middle femora.

Stenodema Schaef.

7. All the tibiæ with distinct spines externally; antennæ short, extending backwards a little below the anterior angles.....**Airora** Reit.

Middle and hind tibiæ not spinous externally; antennæ longer, extending backwards to about middle of prothorax.....8

8. Lateral margin of prothorax behind middle more or less angularly deflexed; basal marginal head of elytra entire; labium very deeply, triangularly emarginate.....**Temnochila** Westw.

Lateral margin of prothorax straight, not angularly deflexed behind middle; basal marginal bead of elytra distinct near humeri but obliterated near scutellum; labium feebly emarginate at apex.

Tenebroides Pill. & M.

Nemosoma schwarzi new species.

Cylindrical, convex, black or piceous, antennæ, palpi, legs and abdomen paler, each elytron with a large, oblique yellowish basal spot not quite attaining sides nor suture and a slightly smaller subsutural spot of the same color behind middle. Head moderately coarsely punctate, punctures somewhat elongate and more closely placed near apex. Antennæ eleven-jointed. Prothorax rather feebly narrowed posteriorly; lateral margin feebly deflexed in front; apical angles obliterated, basal angles obtuse; surface moderately coarsely but not closely punctate. Elytra convex; sides parallel, surface confusedly punctate, punctures moderate. Prosternum moderately coarsely punctate, punctures more numerous and a little coarser at sides. Metasternum at sides coarsely punctate, punctures smaller at middle. Ventral segments of abdomen apparently impunctate. Length 3 mm.

Fort Yuma, Arizona, type in coll. Hubbard and Schwarz, U. S. Nat. Museum.

An easily known species by its decided elytral maculation. The elytra is also relatively shorter than in our other species. The antennæ are apparently eleven-jointed, which will put this species with *fissiceps* Fall and *punctatum* Van Dyke in the subgenus *Monesoma*. *N. attenuatum* Van Dyke which has ten-jointed antennæ belongs in the subgenus *Nemosoma* s. st.

Cylidrella championi Wickh.

This species is described from Colorado but occurs also in Arizona.

Corticotomus caviceps Fall and **læviventris** Casey.

After examining a large series from different localities including California, Arizona, New Mexico, Colorado, etc., I can't do otherwise than unite the two. The excavation of the head is very variable in the large series before me. In some it is very pronounced, in others less so and some of the specimens have no indication of it; these latter I take to be the females. Similar variations occur in *cylindricus* but not as strongly pronounced as in *caviceps*. The punctuation of elytra is also variable, in some specimens very faint in others relatively strong.

Corticotomus depressus new species.

Elongate depressed, color uniformly brown or piceous, legs, antennæ and palpi paler.

Head flat in front, relatively coarsely punctate, punctures on the disk well separated but more closely placed at sides near the eyes. Prothorax about as long as wide; sides slightly arcuate; at apex not wider than the head; surface relatively very densely and coarsely punctate, the punctures mostly separated by less than their own diameter. Elytra very feebly arcuate at sides: punctures of the regular series coarse, close and deeply impressed but gradually finer towards apex; intervals narrow, more or less uniseriately punctate, punctures very distinct and moderately coarse. Underside coarsely punctate, punctures on prosternum moderately close, those on metasternum very dense and separated by less than their own diameter; punctures on ventral segments of abdomen moderately close. Length 4 mm.; width 1 mm.

Alabama (Loding, type); Pennsylvania (Horn collection, teste Liebeck); New Jersey (Liebeck); Lakehurst, N. J. (Engelhardt).

This species is more depressed and much more coarsely punctate

than any of our other species. In the type specimen the intervals are regularly uniseriately punctate; however, in some of the few specimens seen a few adventitious punctures are present, especially on the second interval. The scutellum is more visible in this than in the other species. As far as known it occurs only on pine.

Corticotomus cylindricus var. **texanus** new variety.

Form and size of *cylindricus* but color normally black or piceous and intervals more or less distinctly uniseriately punctate.

Brownsville, Texas.

The intervals in this variety are clearer and generally more sparsely and finely punctate than in typical *cylindricus*, though specimens of the latter occur which approach the var. *texanus* in this respect. The size is generally smaller and the form slightly narrower than in *cylindricus*.

Stenodema new genus.

Head as wide as the prothorax, subconvex, near apical margin obliquely depressed; frontal margin trisinuate; eyes small, transversely oval, distant from the apical margin of prothorax; antennæ eleven-jointed, reaching backwards a little below the apical margin of prothorax, club three-jointed, ninth and tenth joints rather strongly serrate, last joint much larger than the tenth, nearly quadrate and with apex obliquely truncate; last joints of maxillary and labial palpi subconical; submentum trisinuate. Prothorax convex, parallel sided; apical margin feebly arcuate; apical angles obliterated; basal angles rounded. Scutellum indistinct. Elytra as wide as the prothorax; sides parallel; surface punctured in irregular rows. Prosternum behind coxæ convex, arcuately declivous behind; metasternum convex and slightly compressed at sides. Tibiæ without spines on the outer margin; tarsi slightly longer than the tibiæ.

Type—*Stenodema hicoriæ* n. sp.

Stenodema hicoriæ new species.

Cylindrical, convex, shining, color uniformly castaneous; antennæ, palpi and legs slightly paler. Head convex obliquely declivous a little before apical margin; moderately not closely punctate, the declivous apical part rather coarsely striate. Prothorax apparently longer than wide, sides parallel, surface rather sparsely punctate. Elytra cylindrical, sides parallel; surface punctured in irregular rows, punctures moderately coarse, finer towards apex;

intervals smooth. Prosternum smooth at middle with only a few coarse punctures, at sides more closely punctate; metasternum at sides coarsely punctate, more sparsely at middle; abdominal segments moderately closely punctate except the last which is nearly smooth. Length 2 mm.

Tryon, North Carolina.

The type is in the National Museum Collection, marked 3192d Hopk. U. S. and was bred from *hicoria* by W. F. Fiske. Paratypes in the Forest Insect Collection.

This interesting minute new species has the cylindrical form of *Airora* but the form of the head and of the last joint of the antennal club separate it from this as well as from any other North American genus.

Airora minuta new species.

Cylindrical, convex, shining, color pale castaneous. Head somewhat remotely but not coarsely punctate; shallowly transversely impressed below the occiput. Prothorax not wider than the head; sides parallel; apical margin truncate; apical angles feeble; basal angles distinct but obtuse; lateral margin angularly reflexed a little below apex; surface rather coarsely punctate at sides; punctures finer and more sparse at middle. Elytra as wide as the prothorax; sides parallel, broadly rounded at apex; surface somewhat transversely wrinkled with rows of moderate punctures, intervals scarcely punctate. Prosternum and metasternum feebly punctate; ventral segments of abdomen rather coarsely punctate; tibiæ scarcely spinous. Length 3 mm.

Fort Yuma, Arizona.

Type, one specimen in coll. Hubbard and Schwarz, U. S. Nat. Museum, which bears the note "preying on *Hylocorus*."

Besides the small size this species differs from *æqualis* Reitt. and allies by having the apical angles of prothorax not produced, the lateral margin of prothorax angularly reflexed near apex and the elytral striæ not impressed.

Temnochila edentata new species.

Generally smaller than *yuccæ* Cr., front tibiæ evenly convex and not margined on each side of upper edge and without toothlike projections on outer margin, otherwise as in *yuccæ*. Length 14–15 mm.

Prescott, Arizona.

Most of the specimens seen were collected by Dr. Kunze and distributed by Mr. Chas. Palm. They differ constantly from typical *yuccæ* by the characters given above. Specimens of the latter species

in the Leconte collection which I examined and in the collections of Dr. Horn and the American Entomological Society, kindly examined at my request by Mr. Chas. Liebeck, all have the anterior tibiæ margined and the outer margin with one or two teeth. They all came undoubtedly from the original lot collected by Crotch in the Mohave desert.

Temnochila acuta Lec.

This is a distinct species and not synonymous with *virescens* as given in our lists. The head is dull, the abdominal segments finely alutaceous, the sensitive spaces of the joints of the antennal club are larger than in any of our other species and the posterior margin of the prosternum in most of the specimens is more convex and apparently feebly produced at middle. The males have the ventral segments at sides with a rather finely and closely punctate area which extends almost to middle and with very few larger punctures intermixed.

This species occurs also in Mexico and was considered by Dr. Sharp in the "Biologia" to be Fabricius' *virescens.* While there is a possibility that *virescens* is wrongly identified it is also possible that Dr. Sharp's identification is wrong as he gives no tangible reason why this species should be the true *virescens* of Fabricius. Drury who sent the specimen to Fabricius, received his American insects either from North or South America as far as I know, but Dr. Sharp did not give any South American locality for his *virescens.* If the specimen sent to Fabricius came from North America it was collected on the Atlantic coast and could be nothing else than our common species which occurs from Long Island to Florida.

Fabricius gives America only as locality and his rather vague description might fit almost any metallic green species of *Temnochila.* However, the size he gives—"*triplo major L. caraboides*"—restricts it only to the larger species. I have seen a great number of specimens of our common species but all are not nearly three times as large as *Tenebroides mauritanica,* which is the same as Fabricius' *Lucanus caraboides,* except one specimen from Florida which is about 19 mm. long. The examination of the type would settle the matter, but unfortunately I was unable to locate it. Mr. Champion and Mr. Arrow wrote me that the type is not in the British Museum collection

nor is it in the old collection of Fabricius in Kiel as I was informed by Dr. Walther Horn.

Not being able to clear this point at present it is better to follow the determinations of Leconte, Reitter, Horn and others in calling our common Atlantic coast species *virescens*.

Temnochila virescens var. **chlorodia** Mann.

The specimens from the Pacific coast, which are the *chlorodia* of Mannerheim, are certainly distinct enough to be listed as a variety of *virescens*. They differ from *virescens* by being shorter, stouter and more convex, apical angles of prothorax more prominent and acute, basal angles of prothorax less prominent and humeral angles of elytra more or less acute. *T. cyanea* Reitt. and *T. viridicyanea* Mann. are synonyms of this form.

The specimens from the Atlantic coast are always more elongate and more depressed and the humeral angles of elytra are never as acute as in those from the Pacific coast.

Temnochila peninsularis new species.

Very near *acuta* Lec. in size, form and color but joints of antennal club relatively smaller with the sensitive spaces narrower than *acuta*. Length

Santa Rosa, Lower California (Beyer).

The three males before me are a little more robust than *acuta* and *ærea* and the head and abdominal segments are a little less alutaceous than *acuta* but these parts are not as shining as in *ærea*.

Temnochila ærea Lec.

Temnochila nyenta Dow.

Leconte's specimen is described from San Francisco, Cal., but I have no doubt that this is a mistake. The species, as far as known occurs only in southern California and Arizona. The type of *ærea* is a male and has the same ventral characters as Dow's *nyenta*. In the majority of specimens the frontal impression of the head is faint or absent but specimens occur in which it is more or less distinct. This distinct species is also erroneously placed as a synonym of *virescens*, but is a larger species and the male has the ventral segments of abdomen as in *acuta*.

Temnochila prosternalis new species.

Elongate, subparallel; color of upper and under surface metallic green, blue or purple; antennæ and palpi piceous. Head shining, rather densely and relatively coarsely punctate especially in front; front with a deep, longitudinal median impression. Prothorax densely and rather coarsely punctate on the disk, less densely near lateral margin; anterior angles acute, slightly produced; lateral margin feebly rotundate-angulate slightly behind middle; basal angles obtuse, not prominent. Elytra with rather coarse deep and closely placed punctures; intervals with slightly smaller punctures. Prosternum with moderately large not densely placed punctures, behind the coxæ with a more or less distinct transverse impression. Metasternum punctured as the prosternum. Abdominal segments shining, with moderately large punctures; males with a very small area of finer punctures intermixed with larger punctures at sides of each segment. Length 10–11.25 mm.

Williams, Arizona. (Barber & Schwarz coll.)

The type is in the Nat. Museum collection, paratypes in the collections of the Museum of the Brooklyn Institute and in Prof. Wickham's collection.

This species looks very much like small specimens of *virescens* var. *chlorodia* but has a much more densely and relatively coarsely punctate head, prothorax and elytra and the prosternum behind the coxæ at apex more or less distinctly impressed.

It is apparently closely related to *fraudulenta* from Mexico and *planicollis* from Guatemala. The metallic green species in this genus differ much individually in color, sculpture, etc., and it is possible that these three species are all one.

Temnochila obscura Reitt.

This species does not occur in North America.

Tenebroides crassicornis Horn.

Trogosita pleuralis Horn.

This is not a variety of *mauritanica* but a distinct species. It is always smaller, relatively less elongate and the joints of the antennæ are shorter and more closely placed than in *mauritanica*. *T. pleuralis* Horn does not seem to differ except in coloration.

Tenebroides soror Duv.

T. foveata Blatch.

I have several specimens from Florida (Key Largo and Key West) which agree closely with the description of the West Indian *T. soror*. Blatchley's *foveata* is the same thing.

Tenebroides arizonensis new species.

Elongate, moderately depressed; color rufo-piceous, elytra with distinct brassy tint.

Head rather finely and sparsely punctate; eighth antennal joint oval. Prothorax transverse; anterior angles broad and rather moderately produced; lateral margin arcuate, moderately convergent posteriorly; basal angles obtuse, acute and very feebly produced; basal marginal bead broadly interrupted at middle; surface somewhat coarsely punctate at sides, punctures a little smaller and less close at middle. Elytra oblong-oval; punctures of the regular series moderately large; punctures of the intervals very fine and mostly obliterated; surface with short, transverse or oblique impressions as in *rugosipennis*. Prosternum, metasternum and ventral segments sparsely and rather finely punctate. Length 5 mm.; width 2 mm.

Arizona.

A single specimen, apparently a female, in the O. Dietz collection, which I had placed with *rugosipennis*. It is very close to that species in form, color and elytral sculpture but the prothorax is not as strongly arcuate at sides as in that species, the posterior angles are distinct and acute, the basal marginal bead is broadly interrupted at middle, the under surface is shining with fine punctuation and the maxillary palpi are narrower and more elongate than in *rugosipennis*.

Tenebroides americanus ssp. **laticollis** Horn.

T. laticollis differs from typical *americanus* in the relatively larger head, shorter and more transverse prothorax, clearer elytral sculpture with the punctures of the intervals mostly always small and the punctuation of prothorax and underside generally finer. It is also smaller than *americanus*. It is almost entitled to specific standing but in the absence of a distinct, strong and independent character and the possession of the same unique, secondary male character and the antennæ with the sensitive spaces formed as in *americanus* I prefer to place it as a subspecies of the latter.

Tenebroides sonorensis Sharp.

T. debilis Fall.

Through the kindness of Mr. Arrow I received from the British Museum one of the three typical specimens from which Dr. Sharp described his *sonorensis* and from Mr. Fall a specimen of his *debilis* which enabled me to settle the synonymy without a doubt.

The shape of prothorax and punctuation in this, as in many of the other species differ considerably.

Tenebroides semicylindricus Horn.
Tenebroides subænea Reit.
Tenebroides helophorus Sharp.

Of the correctness of the proposed synonymy I have scarcely a doubt. Dr. Sharp's good description of the Mexican *T. helophorus* agrees with our insect perfectly and Reitter's description of *T. subænea*, as far as it goes, does not fit any other North American species except *semicylindricus*.

Tenebroides floridanus new species.

Elongate, moderately depressed; color piceous; prothorax dull with feeble æneous tint; elytra shining and more distinctly æneous. Head moderately closely punctate, punctures not very large; eighth antennal joint oval. Prothorax transverse; apical angles moderately produced; lateral margin arcuate, feebly convergent behind, not sinuate before the basal angles; basal angles small, obtuse and subacute; basal marginal bead entire; surface moderately coarsely punctate at sides, punctures smaller at middle. Elytra slightly dilated below middle; punctures of the regular rows rather fine but moderately coarse near base. Prosternum rather finely punctate in front more coarsely punctate posteriorly and at sides. Metasternum finely punctate at middle, moderately coarsely and sparsely at sides. Ventral segments of abdomen moderately closely punctate, punctures finer posteriorly. First ventral segment of the male moderately densely and finely punctate and with a few larger punctures intermixed; second and following segments as in the female Length 5–6 mm.

Florida. Key West, U. S. Nat. Mus. type.

This species resembles in form *T. americanus* ssp. *laticollis* but has a slightly longer prothorax, the basal marginal bead is generally entire and the male has only the first ventral segment densely punctured.

Tenebroides marginatus Pal. Beauv.
Tragosita cucujiformis Horn.

Palisot de Beauvois' species can not be identified with certainty from his poor descriptions and figures. However, one of his species, *marginatus*, is recognized in our list and if correctly so Dr. Horn's *cucujiformis* is a synonym of this species. The latter species was described from an immature specimen. The form of prothorax as well as the punctuation of the upper surface is very variable in this as well as in the other species of this genus.

Tenebroides opaca Reit. Verd. Nat. Ver. Brünn XIII, 1875, p. 69.

The localities given by Reitter for this species are "Columbia et Amer. bor." The male has on each side of the submentum a fulvous hair-pencil, a character which is found only in our *americanus*. The description, however, does not agree with *americanus* nor any of the described varieties. Many localities of Reitter's material are wrong and I believe that the N. Amer. locality for this species is also a mistake.

Tenebroides patruelis Reit. Verh. Nat. Ver. Brünn XIII, 1875, p. 70.

Reitter's specimens from which he described the species are said to be from "Brazilia and Carol. merid." The N. Amer. locality is very likely wrong as I am unable to apply his description to any of our North American species.

Tribe OSTOMINI.

1. Front coxal cavities closed.....**Calitys**
   Front coxal cavities open behind.....2.
2. Mentum transverse; antennal grooves feeble.....3.
   Mentum oval, minute; antennal grooves deep.....5.
3. Elytra with more or less distinct costæ, upper surface smooth.....4.
   Elytra without costæ, irregularly punctate; upper surface distinctly pubescent .....**Ostomodes**
4. Hook-like process of inner lobe of maxillæ situated externally; antennal club loosely jointed, last joint ovate, narrowing towards apex; larger species about 5–10 mm. .....**Ostoma**
   Hook-like process of inner lobe of maxillæ situated internally; antennal club compact, last joint short, widening towards apex, small species about 3 mm. .....**Lophocateres**
5. Elytra without costæ, irregularly punctate; metasternum on each side below middle coxæ with an arcuate line; convex species.....**Thymalus**

Ostoma grossa and **oblonga**.

These two European species are wrongly included in our list.

Ostoma oregonensis new species.

Very close to *quadrilineata* Melsh., color castaneous, prothorax more shining, less strongly narrowing towards apex and punctures more widely separated than in *quadrilineata;* intervals of elytra with three rows of moderately coarse and well separated punctures between the costæ, the row next to each costa regular, the punctures of the median row rather widely separated and irregular. Length 7.5 mm.

Dilley, Oregon.

This is the *Grynochris oregonensis* of our list which has never been described by Crotch.

Lophocateres americanus Mots.

The species of this genus are very small and closely related to *Ostoma* subg. *Grynocharis.*

NOTES ON SOME CHANGES IN THE LIST OF COLEOPTERA.

By CHARLES W. LENG.

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A few happy days in September, 1918, were spent with Mr. Wm. T. Davis in the U. S. National Museum, where Dr. E. A. Schwarz and Mr. Herbert S. Barber very kindly examined the manuscript of my List of Coleoptera and gave me the benefit of their fund of information on some groups as they looked over the pages. These notes result, and as much of the information is otherwise unpublished, they are now printed with the permission of my informants.

Other unpublished notes have also been received in correspondence with Mr. J. M. Swaine and other friends and are likewise included.

On November 24, Colonel Casey's Memoirs VIII was received and several notes in the Carabidæ result therefrom, since it is devoted principally to that family.

I have not adopted Colonel Casey's view that the genus *Ptcrostichus* of Bonelli does not occur in America. I am fully in accord with the restriction of its meaning to the western forms he includes under *Hypherpes* Chd.; but until a revision of the Pterostichini of the world is made, it seems premature to announce (in substance) such an important fact in distribution as is implied in asserting that our species belong to different genera than the Palæarctic species.

Ptcrostichus agonus Horn, by the description, which mentions its near relation to *punctatissimus,* evidently belongs in *Lypcrophcrus* Mots. if *punctatissimus* does.

It is unfortunate that Colonel Casey did not compare the species described by Poppius, 1905 and 1907, in the genus *Cryobius;* there are